New York State Integrated Pest Management Program

Control of Blossom, Shoot and Rootstock Fireblight In Young, Dwarf Apple Trees Through Nutrition, Pruning and Growth Regulators.

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ABSTRACT:

Control of fireblight on young apple trees of highly-susceptible cultivars is an increasing problem in NY. The necessity of achieving early production in order to recover investment quickly requires fast tree growth, which may increase susceptibility to fire blight, especially with the cultivars and rootstocks now favored by the industry. Through this project we are studying the relationship between plant nutrition and fire blight severity and the effect of the new growth regulator "Apogee" on fireblight control on young trees. Our results to date indicate that different fertilization practices can have a small but significant effect on tree growth and on shoot blight severity. In general, the lower the nitrogen fertilization rate the lower the severity of fireblight infection; however, unfertilized trees have the poorest tree growth. The best combination of growth and the least severity of fireblight was with the high K treatment. The most promising results were with the new environmentally friendly growth regulator "Apogee". Apogee provided phenomenal fireblight protection but caused more growth reduction than optimal from a horticultural perspective. However, the economic effect of the growth reduction from Apogee may prove to be positive if the untreated trees die or have to be pruned severely to save the trees. Treating young trees with Apogee can provide significant fireblight protection from devastating late season shoot blight infections caused by hail storms or wind storms. Further work is needed on even lower rates and other timings than used in this study to determine if lower rates will allow better tree growth while still providing fireblight protection.

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